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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/826,724

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Kyung-Tae Yang

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35884

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11/28/2007

LEE, HONG, DEGERMAN, KANG & SCHMADEKA

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EXAMINER

MISLEH, JUSTIN P

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/826,724	Applicant(s) YANG ET AL.	
	Examiner Justin P. Misleh	Art Unit 2622	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 September 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 2, and 4 - 20 is/are pending in the application.
- 4a) Of the above claim(s) 18 - 20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 2, and 4 - 17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Note: The Examiner for the present application has changed.

Election/Restrictions

1. Newly submitted **Claims 18 – 20** are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: Original Claims 1 – 11 were clearly directed to figures 3 – 14 where the camera, motor, and decelerator are aligned in the direction of the axis of rotation, wherein new Claims 18 – 20 are clearly directed to figures 15 – 17 where there appears to be two parallel axes where the camera is aligned with one axis and the gear motor is aligned with the other axis.
2. Since Applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, **Claims 18 - 20** are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Response to Arguments

3. Applicant's arguments filed September 5, 2007 have been fully considered but they are not persuasive.
4. Applicant argues, "It is further respectfully noted that although the decelerator 42 is disclosed throughout Lim, nowhere in Lim does it disclose a detailed description or individual elements of the decelerator 42. Lim only discloses that the decelerator 42 is installed at one end

of the motor and decreases a rotating force generating in the motor 41 and increases torques to rotate an output terminal (s1), which is connected to a side of camera.”

5. The Examiner respectfully acknowledges “nowhere in Lim does it disclose a detailed description or individual elements of the decelerator 42”; however, the Examiner believes the claimed elements of the decelerator, as previously required by Claim 3 and as now required by amended Claim 1, are a necessary part of the Lim's decelerator (42).

6. As shown in figure 3, Lim provides, along the same axis of rotation, a motor (21), a camera (50), an output terminal (s1), and a decelerator (42). Regarding the operation, Lim states, “In short, the motor 41 is installed in one end of the housing 25 to generate a rotating force by having power supplied from the outside, and the decelerator 42 is installed in one end of the motor 41 to decrease a rotating force generating in the motor 41 and increase torques to rotate an output terminal (s1) ... [at] this time, the other end of the output terminal (s1) is connected in a unit with the side of the camera 50 as illustrated in the drawing ... [on] the basis of the present constitution, the rotating force of the motor 41 is delivered to the camera 50 connected to the output terminal (s1) and accordingly it rotates the camera 50 in the forward or backward direction” (see paragraphs 0055 and 0056).

7. Based upon the particular axial arrangements of components and the stated capability of “[decreasing] a rotating force generating in the motor 41 and increase torques to rotate an output terminal (s1)” and “ rotating force of the motor 41 is delivered to the camera 50 connected to the output terminal (s1) and accordingly it rotates the camera 50 in the forward or backward direction”, the Examiner sees no other way to provide such capability other than to provide within the decelerator (42) the claimed “drive gear”, “deceleration gear”, “deceleration rotational

axle”, and a “transmission gear”. For the instance, the motor (41) output shaft coupled with the decelerator (42) would operatively form “a drive gear” and the decelerator (42) output terminal (s1) coupled with the camera (50) would operatively form “a deceleration gear”. Of course, since the torque is being changed a “certain [gear] ratio” is inherently provided. And finally, the actual mechanism for changing the torque would operatively form “a transmission gear”. Thus, the Examiner believes Lim provides the necessary elements to anticipate the claim language.

8. For these reasons, the rejection will be maintained.

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

10. **Claims 1, 2, 4, 8, 9, 11, and 15 – 17** are rejected under 35 U.S.C. 102(e) as being anticipated by Lim (US 2003/0227564 A1).

11. For **Claim 1**, Lim discloses, as shown in figure 3, a camera assembly for a mobile communication device (cellular phone equipped with camera drive unit, fig 3), comprising:

a camera (camera 50); and a first portion adapted to rotate said camera (housing 25), said first portion comprising a housing (housing 25), a gear motor mounted in said housing for generating a rotational force (motor 41), and means for decelerating said rotational force for the

purpose of rotating said camera (decelerator 42), wherein said decelerating means includes a drive gear provided at a camera motor (motor 41 on the same axle as the camera and decelerator) axle and being adapted to decelerate said rotational force generated from said gear motor (decelerator 42 decreases a rotating force from the motor 41), a deceleration gear operatively coupled to said drive gear and deceleration-rotated with a certain ratio (decelerator 42), a deceleration rotational axle for transmitting said decelerated rotational force (rotational axle is interpreted as being the same axle the camera and motor are located on), and a transmission gear operatively coupled between said drive gear and said deceleration gear (output terminal (s1) is interpreted as the transmission gear in that it relays the output to the camera).

As shown in figure 3, Lim provides, along the same axis of rotation, a motor (21), a camera (50), an output terminal (s1), and a decelerator (42). Regarding the operation, Lim states, "In short, the motor 41 is installed in one end of the housing 25 to generate a rotating force by having power supplied from the outside, and the decelerator 42 is installed in one end of the motor 41 to decrease a rotating force generating in the motor 41 and increase torques to rotate an output terminal (s1) ... [at] this time, the other end of the output terminal (s1) is connected in a unit with the side of the camera 50 as illustrated in the drawing ... [on] the basis of the present constitution, the rotating force of the motor 41 is delivered to the camera 50 connected to the output terminal (s1) and accordingly it rotates the camera 50 in the forward or backward direction" (see paragraphs 0055 and 0056).

Based upon the particular axial arrangements of components and the stated capability of "[decreasing] a rotating force generating in the motor 41 and increase torques to rotate an output terminal (s1)" and "rotating force of the motor 41 is delivered to the camera 50 connected to the

output terminal (s1) and accordingly it rotates the camera 50 in the forward or backward direction”, the Examiner sees no other way to provide such capability other than to provide within the decelerator (42) the claimed “drive gear”, “deceleration gear”, “deceleration rotational axle”, and a “transmission gear”. For the instance, the motor (41) output shaft coupled with the decelerator (42) would operatively form “a drive gear” and the decelerator (42) output terminal (s1) coupled with the camera (50) would operatively form “a deceleration gear”. Of course, since the torque is being changed a “certain [gear] ratio” is inherently provided. And finally, the actual mechanism for changing the torque would operatively form “a transmission gear”.

12. As for **Claim 2**, Lim discloses wherein said gear motor and said decelerating means are coaxially arranged (fig 3 demonstrates that the motor 41 and decelerator 42 are coaxially arranged).

13. As for **Claim 4**, Lim discloses wherein a first connection terminal is installed at said gear motor (motor 41 is installed in one end of the housing 25 to generate a rotating force by having power supplied from the outside, paragraph [0055], lines 1-3, this is interpreted as a first connection through which the motor receives power), and a second connection terminal is coupled to at least one of a plurality of body side hinge portions relative to said first connection terminal (paragraph [0028], lines 2-9, this section is interpreted as a second connection relative to the first in that it connects the side portion with the camera rotating portion).

14. As for **Claim 8**, Lim discloses means for controlling the rotation of said camera (motor 41 and decelerator 42).

15. As for **Claim 9**, Lim discloses wherein a flexible printed circuit board (FPCB) accommodation portion is formed at one side of said camera (paragraph [0052], lines 1-7).

16. As for **Claim 11**, Lim discloses wherein said camera is directly connected to deceleration rotational axle (fig 3 shows that camera 50 is on the same rotational axle as decelerator 42).

17. As for **Claim 12**, Lim discloses, as stated in paragraphs 0057 – 0059, wherein control of the rotation is selected via a keypad.

18. As for **Claim 13**, Lim discloses, as stated in paragraphs 0057 – 0059, wherein the rotation of said camera is automatically controlled by supplying power to the gear motor.

19. As for **Claims 15 – 17**, Lim discloses wherein said transmission gear is mounted on a bracket and rotates via an axle, wherein said rotational force generated by the gear motor is transmitted sequentially through said drive gear, transmission gear, and deceleration gear, and wherein said rotational force is outputted via said deceleration rotational axle (see Examiner's explanation below).

As shown in figure 3, Lim provides, along the same axis of rotation, a motor (21), a camera (50), an output terminal (s1), and a decelerator (42). Regarding the operation, Lim states, "In short, the motor 41 is installed in one end of the housing 25 to generate a rotating force by having power supplied from the outside, and the decelerator 42 is installed in one end of the motor 41 to decrease a rotating force generating in the motor 41 and increase torques to rotate an output terminal (s1) ... [at] this time, the other end of the output terminal (s1) is connected in a unit with the side of the camera 50 as illustrated in the drawing ... [on] the basis of the present constitution, the rotating force of the motor 41 is delivered to the camera 50 connected to the output terminal (s1) and accordingly it rotates the camera 50 in the forward or backward direction" (see paragraphs 0055 and 0056).

Based upon the particular axial arrangements of components and the stated capability of “[decreasing] a rotating force generating in the motor 41 and increase torques to rotate an output terminal (s1)” and “rotating force of the motor 41 is delivered to the camera 50 connected to the output terminal (s1) and accordingly it rotates the camera 50 in the forward or backward direction”, the Examiner sees no other way to provide such capability other than to provide within the decelerator (42) the claimed “drive gear”, “deceleration gear”, “deceleration rotational axle”, and a “transmission gear”. For the instance, the motor (41) output shaft coupled with the decelerator (42) would operatively form “a drive gear” and the decelerator (42) output terminal (s1) coupled with the camera (50) would operatively form “a deceleration gear”. Of course, since the torque is being changed a “certain [gear] ratio” is inherently provided. And finally, the actual mechanism for changing the torque would operatively form “a transmission gear”.

Claim Rejections - 35 USC § 103

20. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

21. **Claims 5 – 7, and 10** are rejected under 35 U.S.C. 103(a) as being unpatentable over Lim in view of Kang (US 7,133,691).

22. As for **Claim 5**, with respect to the Lim's disclosure as described above, Lim does not disclose a frictional plate is coupled to said deceleration rotational axle.

In the same field of endeavor, Kang teaches a portable phone with a camera that can rotate 360 degrees around. Kang further discloses a bushing 42 and a elastic sub-part 44 which are attached to the camera module 30 and act as a frictional plate.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include the bushing and elastic sub-part found in Kang into the cellular phone equipped with camera drive unit found in Lim in order to provide a lock-in position, which will produce a much more accurate image in that it stops the camera from rotating on it's own.

23. As for **Claim 6**, the combination of Lim in view of Kang further teaches the camera assembly of claim 5, wherein said frictional plate is provided with a plurality of stepped protrusions (protrusion 44a), and said camera is provided with a plurality of grooves adapted to mate with said plurality of stepped protrusions (grooves 42a).

24. As for **Claim 7**, the combination of Lim in view of Kang further teaches the camera assembly of Claim 6, wherein said stepped protrusions and said mating grooves are respectively hemispherically shaped (fig 6 in Kang shows that the protrusions and grooves are hemispherically shaped).

25. As for **Claim 10**, with respect to the Lim's disclosure as described above, Lim does not disclose the first portion is inserted into a hinge groove formed inside said plurality of body side hinge portions and is fixed by a fixation ring.

In the same field of endeavor, Kang teaches a portable phone with a camera that can rotate 360 degrees around. Kang further discloses a bushing 42 and a elastic sub-part 44 which

are attached to the camera module 30 and act as a fixation ring as well as the portion that extends into the grooves on the housing as seen in fig 4.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include the properties of connecting the camera module to the body found in Kang into the cellular phone equipped with camera drive unit found in Lim in order to provide a lock-in position, which will produce a much more accurate image in that it stops the camera from rotating on it's own.

26. **Claim 14** is rejected under 35 U.S.C. 103(a) as being unpatentable over Lim.

27. As for **Claim 14**, Lim discloses, as stated in paragraphs 0057 – 0059, wherein the rotation of said camera is automatically controlled by supplying power to the gear motor; however, Lim does not disclose wherein the rotation of said camera is manually controlled by turning off the gear motor.

However, Official Notice (MPEP §2144.03) is taken that both the concepts and advantages of providing a camera phone with a camera wherein the rotation of said camera is manually controlled by turning off the gear motor is well known and expected in the art. At the time the invention was made, it would have been obvious to one with ordinary skill in the art to have provided wherein the rotation of said camera is manually controlled by turning off the gear motor in the camera phone of Lim for the advantage of using the camera in when the power supply is not fully charged.

Conclusion

28. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

29. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Justin P Misleh whose telephone number is 571.272.7313. The Examiner can normally be reached on Monday through Friday from 8:00 AM to 5:00 PM.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Lin Ye can be reached on 571.272.7372. The fax phone number for the organization where this application or proceeding is assigned is 571.273.8300.


Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR

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system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Justin Misleh
Examiner, GAU 2622
November 26, 2007



LIN YE
SUPERVISORY PATENT EXAMINER